



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/740,146	12/18/2000	Anisul Khan	AM-3396.D1	4163
32588	7590	10/03/2003	EXAMINER	
APPLIED MATERIALS, INC. 2881 SCOTT BLVD. M/S 2061 SANTA CLARA, CA 95050			GOUDREAU, GEORGE A	
			ART UNIT	PAPER NUMBER
			1763	

DATE MAILED: 10/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09-740,146

Applicant(s)

Khan et al.

Examiner

George Goudreau

Group Art Unit

1763

— The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address —

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

☒ Responsive to communication(s) filed on 7-03' (ie, - paper # 8)

☐ This action is FINAL.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

☒ Claim(s) 37-55 is/are pending in the application.

Of the above claim(s) is/are withdrawn from consideration.

☐ Claim(s) is/are allowed.

☒ Claim(s) 37-55 is/are rejected.

☐ Claim(s) is/are objected to.

☐ Claim(s) are subject to restriction or election requirement

## Application Papers

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119 (a)-(d)

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).

☐ All ☐ Some\* ☐ None of the:

☐ Certified copies of the priority documents have been received.

☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_

☐ Copies of the certified copies of the priority documents have been received

in this national stage application from the International Bureau (PCT Rule 17.2(a))

\*Certified copies not received: \_\_\_\_\_

## Attachment(s)

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s) 5-6

☐ Interview Summary, PTO-413

☒ Notice of Reference(s) Cited, PTO-892

☐ Notice of Informal Patent Application, PTO-152

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Other \_\_\_\_\_

Office Action Summary

1. The previous election of species requirement is withdrawn at this time without prejudice.
2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 38-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Qian et. al. (6,136,211).

Qian et. al. disclose a rie etching apparatus which is equipped with means for forming a plasma using an RF inductively coupled coil (115) which surrounds the plasma etching chamber. The substrate to be rie etched rests on an RF biased cathode. A computer is used to control the introduction of several different process gasses (i.e.-at least three different process gasses) into the plasma etcher so that different etching processes may be performed sequentially on the wafer. The RF power supplied to the cathode electrode is matched to the RF power supplied to the anode electrode (i.e.-the inductively coupled RF coil). This is discussed specifically in columns 3-13; and discussed in general in columns 1-20. This is shown in figures 1-7.

Qian et. al. fail, however, to specifically disclose the following aspects of applicant's claimed invention:

- the specific usage of the specific gasses which are claimed by the applicant;
- the specific usage of a computer to control the amount of power supplied to each electrode during the etching process; and
- the conduction of the specific process which is claimed by the applicant

It would have been obvious to one skilled in the art to use a computer to control the amount of power supplied to each of the anode, and the cathode electrodes in the apparatus taught above based upon the following. The usage of a computer to control the amount of power supplied to electrodes in a plasma etcher is conventional or at least well known in the plasma etching arts. (The examiner takes official notice in this regard.) Further, this simply represents the usage of an alternative, and at least equivalent means for adjusting the power supplied to each electrode in the apparatus taught above to the specific means which are taught above. Also, the examiner cites the case law listed below of interest to the applicant in this regard.

In re Venner (120 U.S.P.Q. 192 (CCPA )) states that it is not an "invention" to broadly provide mechanical or automatic means to replace manual activity which has accomplished the same results.

Thus, it would have been obvious to one skilled in the art to use a computer to adjust the amount of power sent to each electrode in the apparatus taught above based upon In re Venner as cited above since this reference teaches the manual adjustment of the amount of power sent to each electrode.

In regards to applicant's claimed process limitations in their apparatus claims, the examiner cites the case law listed below of interest to the applicant.

Furthermore, it is obvious to one skilled in the art that the configuration of the substrate worked upon by the apparatus claimed in this invention is not patentable in view of In re Young (25 U.S.P.Q. 69, 71 (CCPA 1935)) and In re Rishoi (94 U.S.P.Q. 71,73 (CCPA 1952)). The Court of Customs and Patent Appeals stated in In re Young that inclusion of material worked upon by a machine as element in claim may not lend patentability since claim is not otherwise allowable. Similarly, the Court of Customs and Patent Appeals stated in In re Rishoi that there is no patentable combination between a device and the material upon which it works.

Thus, it irrelevant if the apparatus taught above is used to conduct applicant's claimed process since the apparatus taught above is clearly capable of conducting applicant's claimed process. Further, it is irrelevant if the specific process gasses which are claimed by the applicant are employed in the apparatus taught above since the apparatus taught above teaches the usage of at least three different process gasses, and is inherently capable of using the specific process gasses which are claimed by the applicant. Thus, all of applicant's claimed limitations are fully met in this regard.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner George A. Goudreau whose telephone number is (703) -308-1915. The examiner can normally be reached on Monday through Friday from 9:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Examiner Gregory Mills, can be reached on (703) -308-1633. The appropriate fax phone number for the organization where this application or proceeding is assigned is (703) -306-3186.

Application/Control Number: 09/740,146  
Art Unit: 1763

Page 5

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) -308-0661.



George A. Goudreau/gag

Primary Examiner

AU 1763